



CHAIN Project

Cooperation for Holistic Agriculture Innovation Nests in Sub-Saharan Africa
Erasmus+ CBHE Project CHAIN – 101082963



Co-funded by
the European Union

Online Training Session - CHAIN project

Topic: „Reflective Thinking”, January, 13th, 2025

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**Cooperation for Holistic
Agriculture Innovation
Nests in Sub-Saharan Africa**

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Agenda of the training:

1. Reflective Thinking – theoretical background
2. Development Circle – a workshop on reflecting on our capabilities and limitations
3. The GOLD method as a tool for developing reflective thinking
Entrepreneurship test
4. Question & Answer and summary of the training

Reflective Thinking

- theoretical background**

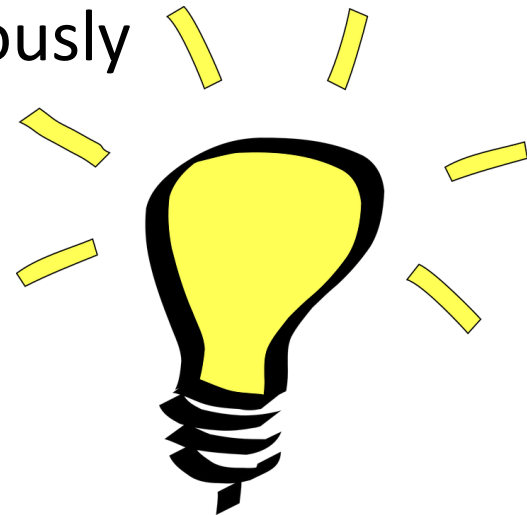
Definition of reflective thinking

Reflective thinking is the process of analyzing and evaluating our thoughts, experiences, and actions in order to gain deeper context and perspectives, which is supposed to lead to better decisions in the future.



The result of the reflective thinking process should be better outcomes based on previously acquired knowledge and experience.

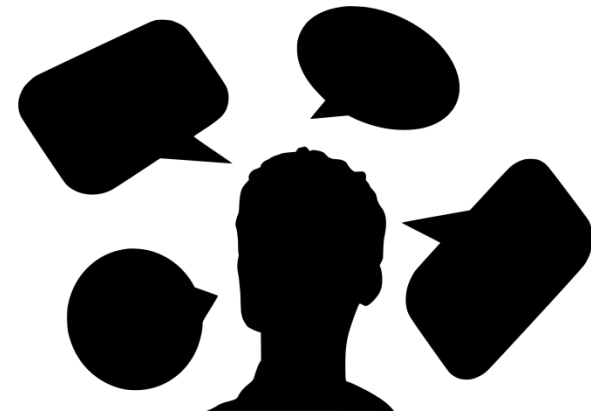
Reflective thinking is also known as *metacognition* or *critical reflection*.



Reflection is considering why what you did or plan to do matters, whether it can be done better than in the past, or what solution seems best in a given situation or context.



Reflective thinking helps us understand something better by taking into account emotions, feelings, knowledge, and previous experiences, and at the same time is an attitude of openness to new solutions based on the obtained facts and thoughts.



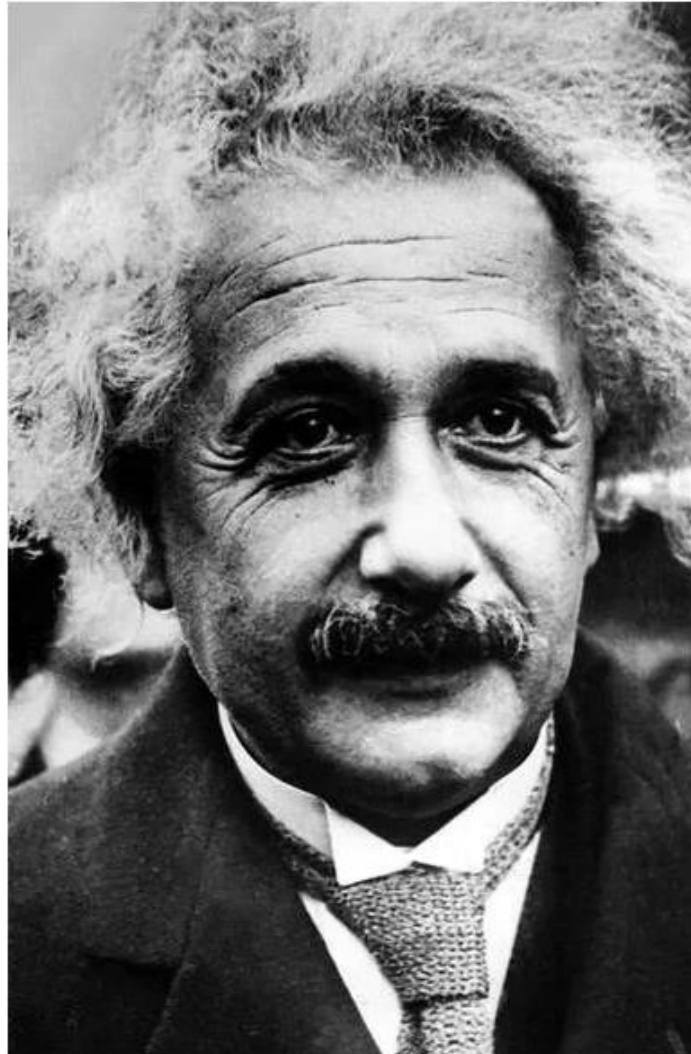
The essence of reflective thinking

Reflective thinking is the ability to think about WHAT we do and HOW we do it.

It requires moving away from established solutions and using mental effort to analyze the state and search for new, better solutions.



***Who is in this photo and why
from the perspective
of today's CHAIN training? 😊***



The place of reflective thinking in educational structures

Types of education structures

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graph TD; A[Types of education structures] --> B[Traditional structured education]; A --> C[Semi-structured education]; A --> D[Progressive „free” education];
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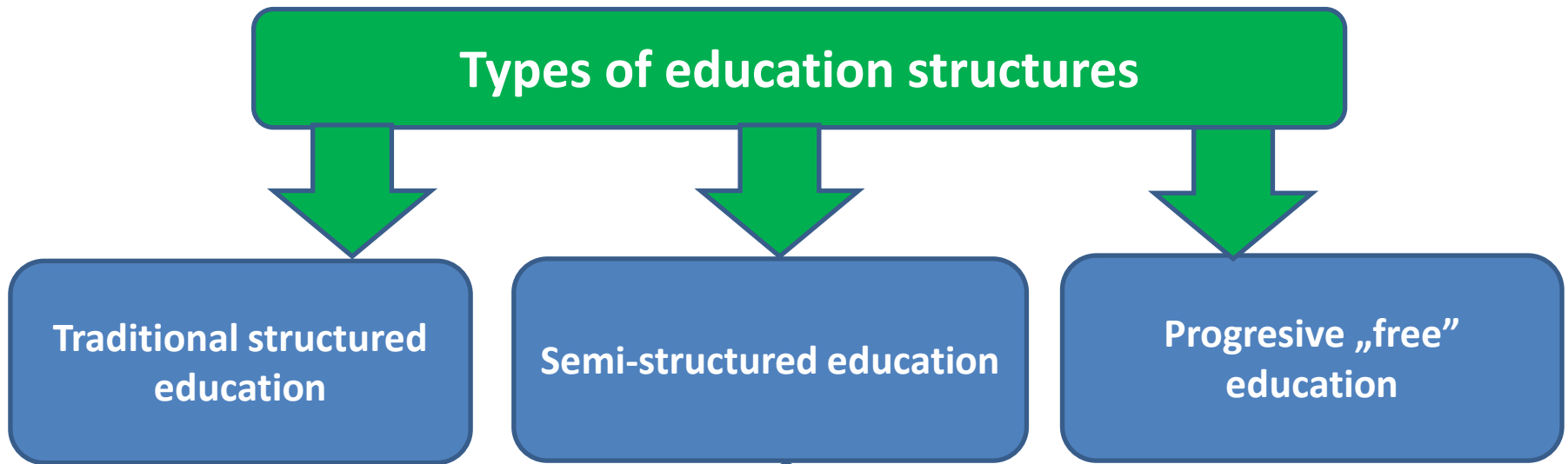
Traditional structured education

(orientation towards the unthinking acceptance of knowledge - knowledge is considered the only and true one)

Semi-structured education
(educational experiences are planned to some extent, educational practice consists in organizing cognitive processes in specific structures)

Progressive „free” education
(education is "free", practically oriented, is not limited by any structures and is not planned)

The place of reflective thinking in educational structures



Reflective thinking is most suited to semi-structured education. It gives students a lot of freedom and allows them to use their natural path of development. Students make progress thanks to their activity and experience. However, the teacher is very important because he organizes these didactic processes, i.e. reflection is a planned form of education.

Reflective Thinking

- benefits for students and teachers**

Reflective Thinking as a Tool to Support the Teaching Process for Students and Teachers

Reflective thinking helps students identify their strengths and weaknesses, define learning goals, and consider alternatives.

For teachers, reflective thinking can help improve teaching practice and make teaching decisions based on data and previous experiences.

Through reflective thinking, students and teachers become active players in their learning journey, constantly adapting and developing based on their reflections.

Benefits of using reflective thinking for students:



1. Increases awareness through better understanding of yourself and your environment.
2. Prepares you to solve problems and make decisions more effectively.
3. Develops creativity and creative thinking.
4. Allows you to better understand the material and assimilate it for a longer period of time.
5. Develops learning skills and strategies.
6. Facilitates dealing with difficult emotions and situations.
7. Increases self-confidence.
8. Allows you to achieve a higher level of social maturity.
9. Allows you to get to know your strengths and areas worth working on.
10. Develops the ability to evaluate your own progress.



Development of various skills thanks to use a reflective thinking

- Taking notes
- Presentation
- Acquiring knowledge
- Paraphrasing and summarizing source texts
- understanding texts (e.g. a scientific article from the FVC area)
- Writing papers (semester, diploma)
- Finding sources
- Using artificial intelligence

- participating in a discussion/debate
- working in a team on a group project
- communication effectiveness
- giving and receiving feedback
- expressing one's own needs
- showing empathy
- dealing with criticism

Models of Reflective Thinking

- examples

In order to develop reflective thinking in classes with students, it is worth getting to know and using different models of this method.

Examples of reflective thinking models:

1. Schön model
2. Borton model
3. Gibbs model



Donald Schön Model

According to D. Schön, reflective learning results from:

- 1) reflection in action***
- 2) reflection on action***

Reflection in action is a process that includes a given activity and at the same moment reflecting on what we are doing.

Student learning results from conscious analysis of one's own activity and the ability to make changes to it during the activity.

Student thinks critically, tries out different approaches, and experiments during a given activity. Reflection in action is about learning from one's own actions and experience. It is a conscious process, but it does not have to be verbalized.

According to Donald Schön, reflective learning results from:

1) reflection in action

2) reflection on action

Reflection on action is an analysis of what happened from a certain time perspective. Learning comes from deep, intellectual reflection, which is not accompanied by time pressure.

Conscious analysis of the action often requires verbalization through discussing what happened with the activity partner or mentor. Analysis of the experience can also take place in written form.

When reflecting on one's own practice, new cognitive values are created. The effect of reflection on action is new knowledge.

Borton Model

The Borton Model consists of 3 stages, which are described by questions:

- 1) WHAT?**
- 2) SO WHAT?**
- 3) NOW WHAT?**



Borton Model

1. WHAT?

- This is a detailed description of the experience being analyzed that involves asking questions beginning with "what?", for example: What happened? What did I do? What was I trying to achieve? What was good or bad about this experience?

2. SO WHAT?

- This stage includes analysis and evaluation of what happened. The student makes in-depth inferences about the event and reflects on what is associated with this experience. Examples of guiding questions: What is the most important thing about what happened? What can I learn more from the experience?

3. NOW WHAT?

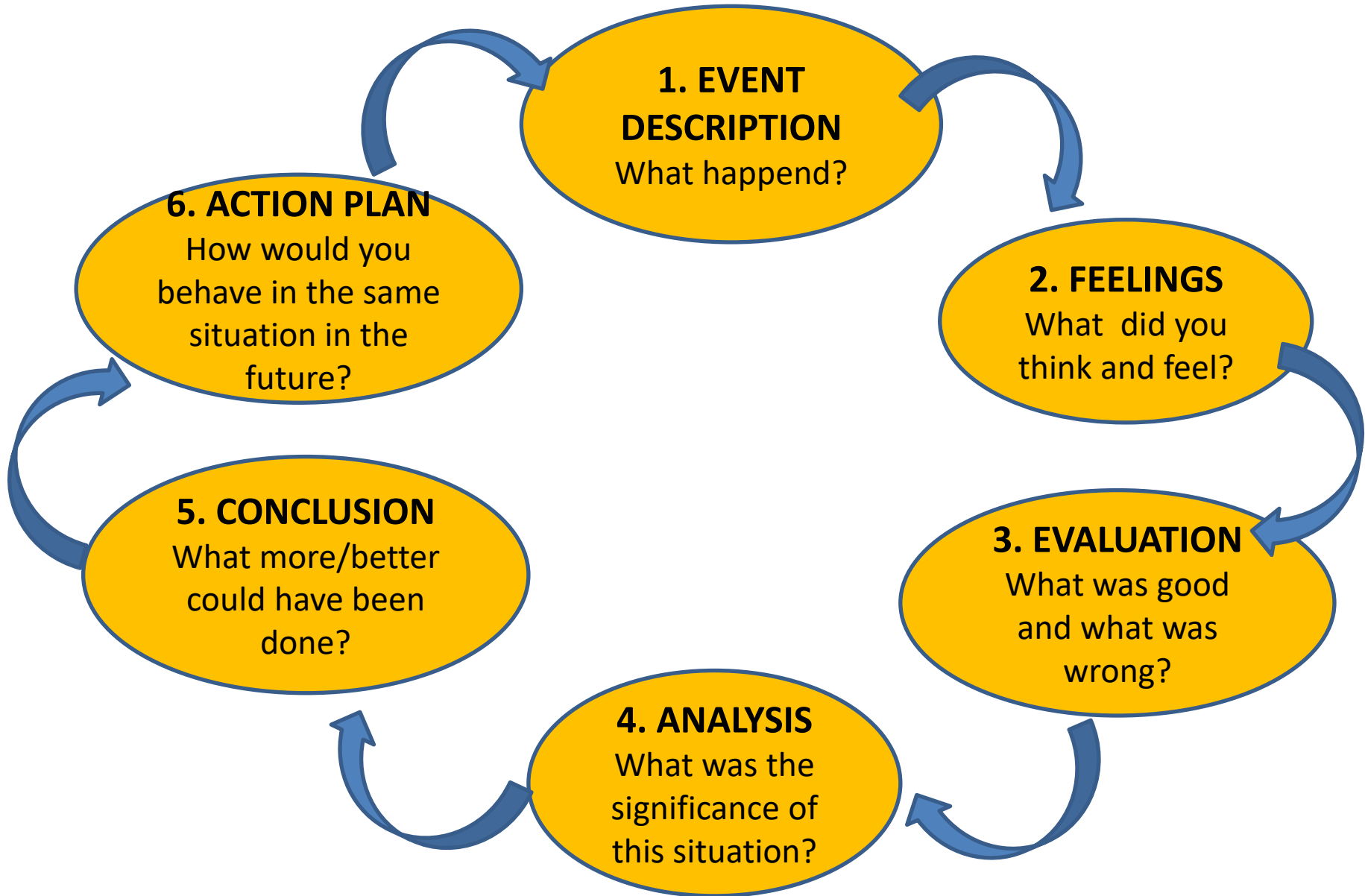
- In the final stage, we consider alternative courses of action and choose what to do next. We ask ourselves: what can I do now?, what do I need to do now?, what could I do later?, what might be the consequences of these events?

Graham Gibbs Model

According to Gibbs, reflection is a key category of the learning process and occurs at each of the six stages of the model he developed.

The additional value of this concept is the emphasis on the role of emotions in learning. G. Gibbs' model is cyclical and is divided into six key areas.

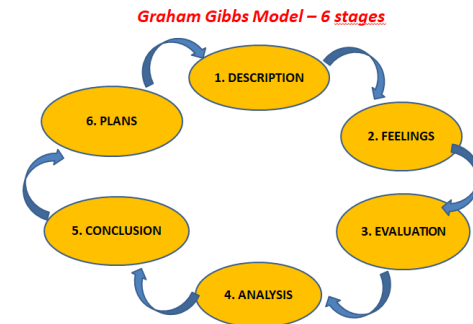
Graham Gibbs Model – 6 stages



Graham Gibbs Model – 1st stage „EVENT DESCRIPTION”

The **event description** is a detailed description of the facts that make up the event. The student reports on the activity, its participants and witnesses, the context and the result.

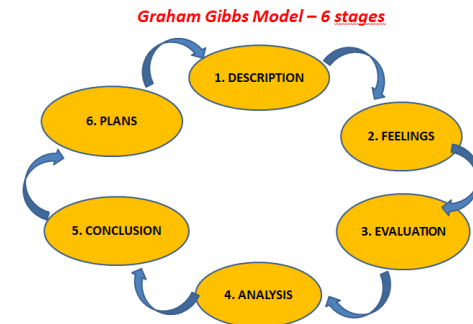
He/she considers: where was he/she?, who else was there?, what were they doing?, what were others doing?, what was the context of the event?, what was the involvement?, what was the result of the activity?



Graham Gibbs Model – 2nd stage „FEELINGS”

In the second stage "**Feelings**", the student should consider feelings, thoughts and their own attitude before and during the event.

Questions for this stage may be: try to remember what you thought and felt at the beginning, how others influenced what you thought and felt?, what do you think about this event now?

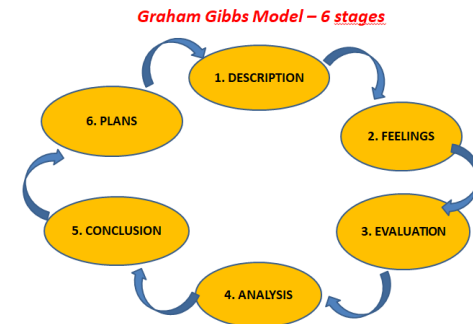


Graham Gibbs Model – 3rd stage „EVALUATION”

In the "**EVALUATION**" stage, the student makes an estimate, which consists of assessing the causes of the event and their possible consequences.

A good solution here is to point out the good and bad sides of the analysed experience. Evaluation is an attempt to assess and explain what happened.

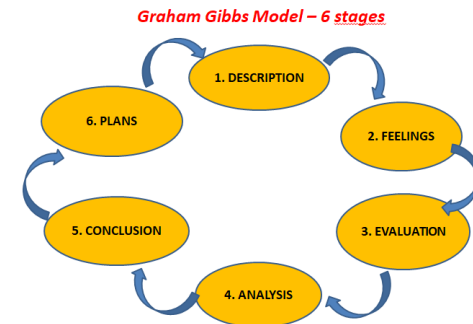
At this stage, the student wonders what went well and what went wrong in general, and what he/she did right or wrong?



Graham Gibbs Model – 4th stage „ANALYSIS“

ANALYSIS is a review of the event, which involves thinking about the meaning of the situation being discussed. The auxiliary questions at this stage are: what does this event mean to me and what is my role in it?

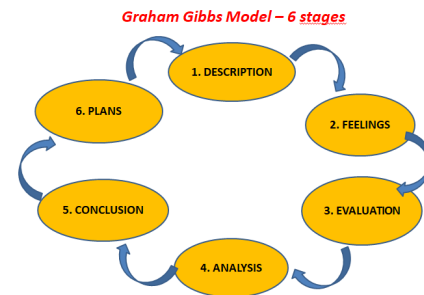
Analysis can be done by examining each element of the event in detail. We explain separately: what went well?, what did I do well?, what did others do well?, what went differently than it should have?, how did others influence this element?



Graham Gibbs Model – 5th stage „CONCLUSION”

CONCLUSION is an in-depth assessment of what happened. The student bases his/her criticism on what he/she knows and on external information about the discussed situation. The student formulates conclusions: what else could have been done? what should I not have done?

At this stage, it is important to remember the purpose of reflection, which is to learn from experience. Detailed analysis and "honest research" are the conditions for a valuable learning opportunity.

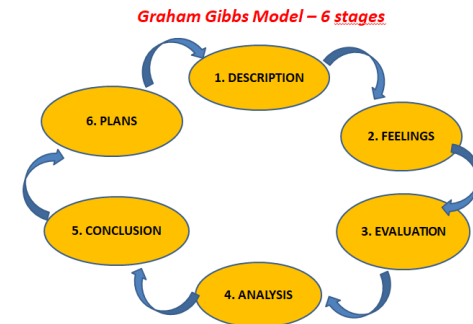


Graham Gibbs Model – 6th stage „ACTION PLAN”

ACTION PLAN consists of thinking about how to behave in the future if a similar problem or situation occurs to the one that occurred in the past.

Reflection is expressed by asking: if I would to find myself in this situation again, how would I act, knowing what I know now?

In other words, at this stage the student looks into the future in case a similar problem/ situation/ project/ event is encountered again.



**Tips, tools and examples for
implementing reflective thinking in a
educational work with students**

Tips for introducing reflective thinking into the teaching process:

1. Start with short exercises and simple questions.
2. Present the benefits and explain in what situations the ability to think reflectively is useful or necessary.
3. Get students used to the reflection process by regularly using elements of this method in your teaching.



Tips for introducing reflective thinking into the teaching process:

4. Do not evaluate the conclusions and the way students speak. Prepare a space and atmosphere that gives a safety and confidence for your students and will facilitate opening up to discussions and student involvement.
5. Let's focus on **LISTENING** to the answers and opinions and critical thinking of our students.
6. Let the students feel that you are interested in what they have to say and you are curious about their opinions (this also applies, or maybe especially, to those students who do not engage in the teaching process).

Tools of developing reflective thinking

**Making notes
from the
lectures**

**Writing a summary of the text
provided to students, along
with their expression of the
feelings and impressions they
had while reading the text.**

1-minute paper

**Group discussion –
after completing a
stage of some work
or project**

**Using didactic cards and
discussing what they present
(cards related to our didactic
course or evoking associations
with the topic we want to cover in
class (e.g. water management in
agriculture))**

**Reflective
writing**

REFLECTIVE WRITING - an example of the application of reflective thinking when writing a student's diploma thesis:

REFLECT



What stages did the process of writing a bachelor's thesis consist of? How did the writing process proceed?
What did you feel while writing your bachelor thesis?

REVIEW



What was good? What didn't you manage to do? What mistakes did you make?
What could have been done differently? What did this experience teach you?

REFINE

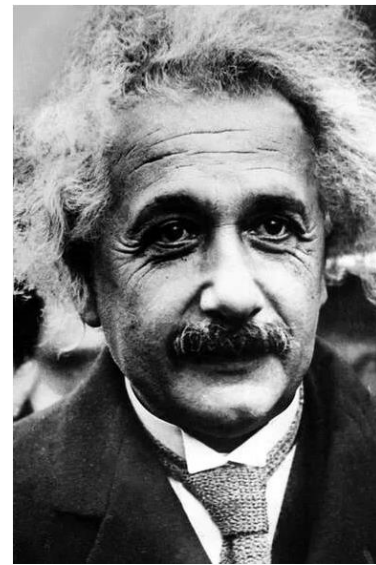


What could have been done better when writing a master's thesis?
What actions do you want to take to achieve the goal of a good quality master's thesis?

Some reflection for the summary...

***The definition of insanity is:
doing the same thing over and over
and expecting a different result.***

Albert Einstein



***So how do we avoid insanity
and doing things in a smart way?***

The solution is to use ***reflective thinking*** and make decisions that will bring us better results than the decisions we made in the past.

*At the end... for the reflection about reflective thinking
in students teaching and learning...*

<https://www.youtube.com/watch?v=PcefQdySMb0>

Video (duration time 3:58) about
why should we teach students to write
and why should we teach reflective and critical thinking?...

Or not????

We as the teachers and supervisors have to thinking
in reflective way and answer the question!

References and useful video materials:

1. Borton T., 1970: Reach, Teach and Touch. McGraw Hill, London.
2. Gibbs G., 1988: Learning by doing: A guide to teaching and learning methods. Oxford Further Education Unit, Oxford.
3. Perkowska-Klejman A., 2013: Modele refleksyjnego uczenia się (*A models of reflective learning*). Journal „Teraźniejszość – Człowiek – Edukacja”, Nr 1(61), pp. 75-90.
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<https://doi.org/10.35765/mjse.2024.1325.07>
5. Schön D.A., 1987: Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Profession. Jossey-Bass Publishers, Oxford.
6. Video „Gibbs Reflective Model with an Example – Simplest Explanation Ever”. Available online: https://www.youtube.com/watch?v=f_wprGcziso
7. Video „Jak uczyć myślenia krytycznego? (*How to teach a critical thinking*)”. Available online: <https://www.youtube.com/watch?v=PcefQdySMb0>
8. Video „Reflective Teaching (Explained for Beginners in 3 Minutes”. Available online: https://www.youtube.com/watch?v=f_wprGcziso
9. Video „Understanding Reflective Practice”. Available online: <https://www.youtube.com/watch?v=iBmtH0Qx0YU&t=40s>



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January, 13th, 2025

**Thank you for your attention
and commitment!**



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